Contents of Vol. 191

Issue 1

Electronics and Optics

Galvanomagnetic and thermoelectric properties of antimony films 1
F. Völklein (Jena, G.D.R.)

Refractive index of vacuum-evaporated SiO thin films: dependence on substrate temperature . . . 13
F. López and E. Bernabéu (Madrid, Spain)

Calculation of semiconductor band bending due to a superficial zone including electronic states: application to Schottky diodes 21
J. M. Palau and M. Dumas (Montpellier, France)

Electromigration and Matthiessen's rule: experiments on non-passivated Al–1%Si films 31
G. L. Baldini and A. Scorzoni (Bologna, India)

Effective lifetime measurements in silicon-on-sapphire material by time-resolved reflectometry . . 37
A. Galeckas, V. Grivickas and M. Petrauskas (Vilnius, Lithuania), L. Frank and J. A. Tellefsen, Jr. (Stockholm, Sweden)

Optical and structural characterization of mixed LaF_3–BaF_2 thin films 47
J. D. Targove and A. R. Murphy (OH, U.S.A)

Metallurgical and Protective Layers

Characterization of titanium nitride thin films 55
H. Z. Wu, T. C. Chou, A. Mishra, D. R. Anderson and J. K. Lampert (Edison, NY, U.S.A.) and S. C. Gujrathi (Montreal, Que., Canada)

Structure and properties of Ni–TiC cermet films formed by ion plating 69
A. Ishida, K. Ogawa, T. Kimura and A. Takei (Tokyo, Japan)

Titanium nitride deposited by plasma-assisted chemical vapour deposition 77
J. Laimer and H. Störi (Wien, Austria) and P. Rödhammer (Reutte, Austria)

Preparation and Characterization
Review

The preparation of thin films by physical vapour deposition methods 91
K. Reichelt and X. Jiang (Jülich, F.R.G.)

Amorphous–crystalline phase transformation of supported aggregates produced by indium deposition 127
M. Treilleux, G. Fuchs, F. Santos Aires, P. Melinon, A. Hoareau and B. Cabaud (Villeurbanne, France)

Low temperature pulsed plasma deposition: III. A method for the deposition of aluminium and tin at room temperature 135
I. P. Llewellyn, N. Rimmer, G. A. Scarsbrook and R. A. Heinecke (Harlow, U. K.)

Mechanism of buried β-SiC formation by implanted carbon in silicon 147
K. J. Reeson (Guilford, U.K.), J. Stoemenos (Thessaloniki, Greece) and P.L.F. Hemment (Guildford, U.K.)

Reactions in thin Ti/metal couples during r.f. sputtering 165
V. Simić and Z. Marin Ković (Belgrade, Yugoslavia)

Langmuir–Blodgett and Related Films

Merocyanine J aggregates: formation and structural change on chemical and thermal treatments . 173
T. Kawaguchi and K. Iwata (Tokyo, Japan)

Issue 2

Electronics and Optics

Method for calculating the optical constants of a non-transmitting layer upon a transmitting substrate 193
D. A. Minkov and P. H. Drashkova (Botevgrad, Bulgaria)

Coupling interaction and surface energy in FeBSi/Si and FeBSi/Pt multilayered structures 201
L. J. Maksymowicz, H. Jankowski, A. Z. Maksymowicz (Mickiewicza, Poland) and R. Zuberek (Warsaw, Poland)

Metallurgical and Protective Layers

Diffusion growth of oxide layers on GaAs single crystals 211
J. Kučera and K. Navrátil (Brno, Czechoslovakia)

The applications of transmission electron microscopy to the characterization of metal thin films on silicon. 221
L. J. Chen, W. Lur and J. Y. Cheng (Hsinchu, Taiwan)

A modified hot wall epitaxy technique for the growth of CdTe and $Hg_{1-x}Cd_xTe$ epitaxial layers. . 239
A. Rogalski, J. Piotrowski and J. Gronkowski (Warsaw, Poland)

Cu–O films produced by reactive d.c. sputtering 247
W. Klein, H. Schmitt and M. Böffgen (Saarbrücken, F.R.G.)

Properties of magnetron-deposited polycrystalline TiN layers 255
J. Stanislav (Liberec, Czechoslovakia), J. Sikac and M. Cermak (Prague, Czechoslovakia)

Order twins in (111)-evaporated thin films of CuAu I 275
R. Zimmerman, E. Broitman, S. Harriague and S. Terlisky (Buenos Aires, Argentina)

Influence of the technological parameters on the growth of a-Si:H by a low pressure d.c. plasma process 283
J. C. Delgado, J. Andreu, G. Sardin and J. L. Morenza (Barcelona, Spain)

Indium–tin oxide deposition by d.c. reactive sputtering on a low softening point material 297
A. Kawada (Beaverton, OR, U.S.A.)

Electrochemical study of titanium nitride films obtained by reactive sputtering. 305
Y. Massiani, A. Medjahed, P. Gravier, L. Argème (Marseille, France) and L. Fedrizzi (Trento, Italy)

Formation of Y–Ba–Cu–oxide thin films by pulsed laser deposition: a comparative study in the UV, visible and IR range 317
W. Kautek (Berlin, F.R.G.), B. Roas and L. Schultz (Erlangen, F.R.G.)

Target and substrate surface reaction kinetics in magnetron sputtering of nitride coatings 335
S. Hofmann (Stuttgart, F.R.G.)

Langmuir–Blodgett and Related Films

Photoablative etching of Langmuir–Blodgett films 349
J. D. Magan, P. Lemoine, W. Blau, M. Hogan (Dublin, Eire), D. Lupo, W. Prass and U. Scheunemann (Frankfurt, F.R.G.)

Condensed Matter Film Behaviour

Secondary electron emission of metal oxide sputtered thin films. 361
N. Croitoru, A. Seidman and K. Yassin (Ramat-Aviv, Israel)

A device for visual detection of antigens and antibodies by means of light interference 369
T. Kawaguchi, T. Shiro and K. Iwata (Tokyo, Japan)

Author Index 383